CC-VEx Weather Outlook -- Valid 1800 UTC/1400 EDT Wednesday 26 July 2006

Upcoming Overpass Scenarios (times are approximate):

Th 27 July: Mandatory no-fly day for ER2
Fr 28 July: 1845 UTC overpass up E coast FL→SW OH→lower MI
Sa 29 July: 1930 UTC across central Gulf→LA→MKC→far SW MN

Discussion:

The ER2 is presently eastbound from NASA-Dryden enroute to a planned coordination w/ the WMI Learjet within a thinning cirrus plume over central GA, prior to the ER2's initial arrival at Warner Robins later this afternoon. The plume issues from a cluster of tropical convection accompanying landfall of a marginal tropical depression, with thunderstorm activity presently focused along the TX/LA coast. This activity is forecast to move northward overnight and lose its identity tomorrow over AR/MO as it merges with a weak baroclinic zone and cool front entering the lower Midwest. This ill-defined surface boundary is associated with the advance of a weakening trough embedded within NW'ly mid-level flow along the northern storm track.

Looking forward to CC-VEx's next flight opportunity in conjunction with the ~1845 UTC Friday (28 July) overpass up east coast of FL toward southwest OH/lower MI, conditions for deep/cold clouds are not all that favorable, but include the following possible targets: (1) developing sea-breeze thundershowers along the east coast of FL (though the overpass comes early in the preferred diurnal convective cycle), with more widespread convection tied to an approaching Atlantic upper-level low and associated weak tropical E'ly wave likely remaining east of the Bahamas at that time; and (2) a band of scattered, poorly-organized weak to moderate convection entering the OH valley along the weakening baroclinic zone. This latter activity would be located in an area where geopotential heights are trending upward in association with a broad mid-/upper-tropospheric ridge forecast to build over North America during the latter part of the week. This pattern is not favorable for frontally-forced convection, but may offer the slight possibility for an nocturnal mesoscale convective system (MCS) beneath the ridge--a climatologically favored mode in mid-to-late-summer--overnight Thursday into early Friday morning. Tomorrow's model runs may shed more light on this possible scenario for cirrus generation.

The trend for the weekend suggests relatively quiet conditions over the Gulf of Mexico (apart from coastal-seabreeze convection), with more widespread diurnal thunderstorms scattered over the southeastern U.S. Moderate vertical shear in the vicinity of the weak tropical wave approaching the Bahamas and widespread Saharan dust in the wake of a better-defined wave in the eastern Atlantic (presently near 60 degW/15-20 degN) continue to inhibit tropical cyclone development in the Atlantic basin.

--
Brad Smull
NASA CC-VEx Forecaster